

No.

8100101



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

## Royal Sluis

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (U.S.C. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

DWARF BEAN

'Flaveol'



Attest:

*Kenneth A. ...*  
Commissioner  
Plant Variety Protection Office  
Grain Division  
Agricultural Marketing Service

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 27th day of February in the year of our Lord one thousand nine hundred and eighty-four.

*John R. Block*  
Secretary of Agriculture



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8100101

DWARF FLAGEOLET BEAN 77RS1703 = 'FLAVEOL'  
=====

OK  
3/25/82

#### Exhibit A Pedigree

77RS1703 is derived from a Vergel type parentline and an own parentline with Anthracnose and Blackroot resistance and with a finer grading.

Line selection has been carried out for several years.

77RS1703 appears to be stable and uniform through several generations of selfing and during the seed increase program.

#### Exhibit B Novelty Statement

77RS1703 is most similar to Chevrier vert 90 jours.

It differs from Chevrier vert 90 jours in being finer graded (77RS1703 9m/100 seed 20; Chevrier vert 90 jours 9m/100 seed 28) and having resistance against Anthracnose and Blackroot.

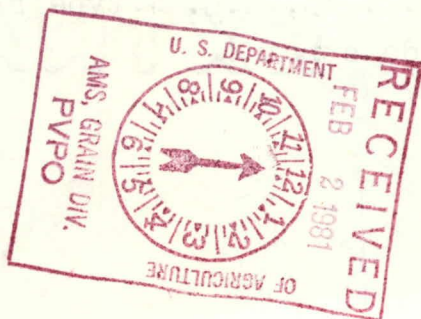
R/S 4/19/83

#### Exhibit D Additional Description

77RS1703 is a Flageolet bean. Flageolet beans are, like peas, consumed as shelled beans in an unumature stage. Dry matter content of the beans at harvesting stage is between 40 and 50%.

77RS1703 is dark green, flat podded with string. It produces 6-7 middle green beans per pod with a fine grading (9m/100 seed 20).

77RS1703 is resistant to Anthracnose race  $\alpha$ ,  $\beta$ ,  $\delta$  and Common Bean Mosaic Virus race N.Y. 15, N.L. 1 type strain, N.L. 4 Mexican strain and Florida strain.





8100101



AMENDMENTS TO EXHIBITS A & B

R/S 2/24/83

ROYAL SLUIS

KONINKLIJKE ZAAIZAADBEDIJVEN GEBROEDERS SLUIS B.V.

USDA, AMS  
Livestock, Poultry, Grain &  
Seed Division  
Nat. Agric. Library Building  
BELTSVILLE, Maryland 20705

POSTBOX 22, 1600 AA ENKHUIZEN  
HOLLAND

U.S.A.

Attn.: mr. Robert J. Snyder

10th February 1983

Dear mr. Snyder,

Subject: Bean Application No. 8100101, 'Flaveol'

Please amend Exhibit A as follows:

Line selection has been carried out during 8 generations.  
In the last 4 generations no variants have been found, so Flaveol  
appears to be stable and uniform through 4 generations of selfing  
and during the seed increase program.

Please amend Exhibit B as follows:

Flaveol is most similar to Chevrier Vert 90 jours. It differs from  
Chevrier Vert 90 jours in being finer graded. Flaveol : 100 seeds  
are 20 grams; Chevrier Vert 90 jours : 100 seeds are 28 grams.

Flaveol differs also from Chevrier Vert 90 jours in being resistant  
to Anthracnose ~~and blackroot~~, to which Chevrier Vert 90 jours is  
not resistant.

R/S 4/19/83

Resistance to Anthracnose race  $\alpha$ ,  $\beta$  and  $\gamma$  has been tested by  
Dr. J.M. Andeweg in Wageningen, in 1980, 1981 and 1982.  
One hundred germinated seeds of each variety were soaked in a  
Anthracnose  $\alpha$ ,  $\beta$  and  $\gamma$  suspension. Flaveol seedlings all survived,  
while Chevrier Vert 90 jours plants were killed.

Concerning the blackroot resistance no detailed evidence is available  
at this moment.

We hope this information is sufficient to proceed the application.

Yours sincerely,

ROYAL SLUIS

J.G. Timmerman

Marketing dept.

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ASTOR LENOX TILDEN FOUNDATION

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UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

FORM APPROVED  
OMB NO. 40-R3822

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY <b>77RS1703</b>		1b. VARIETY NAME <b>77RS1703- FLAVEOL <sup>new</sup> 3/24/83</b>		FOR OFFICIAL USE ONLY PV NUMBER <b>8100101</b>	
2. KIND NAME <b>Dwarf Flageolet Bean</b>		3. GENUS AND SPECIES NAME <b>Phaseolus vulgaris</b>		FILING DATE <b>4/23/81</b>	TIME <b>11:30</b> <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">A.M.</span> P.M.
4. FAMILY NAME (BOTANICAL) <b>Legumination</b>		5. DATE OF DETERMINATION <b>October 1979</b>		FEE RECEIVED \$ <b>500.00</b> \$ <b>250.00</b>	DATE <b>4/23/81</b> <b>12/14/83</b>
6. NAME OF APPLICANT(S) <b>ROYAL SLUIS, Kon. Zaaizaadbedrijven Gebr. Sluis B.V.</b>		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) <b>P.O. Box 22 1600 AA Enkhuizen Holland</b>		8. TELEPHONE AREA CODE AND NUMBER <b>02280-2741</b>	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.)			10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION		11. DATE OF INCORPORATION
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: <b>J.G. Timmerman ROYAL SLUIS P.O. Box 22 - 1600 AA Enkhuizen (Holland)</b>					

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☒ 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) ☐ YES ☒ NO *Call name 2/14/84 per letter of Feb 10, 84*

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ YES ☐ NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? ☒ YES ☐ NO (If "Yes," give name of countries and dates.)

**France - December 13, 1979  
Holland - January 7, 1980**

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? ☒ YES ☐ NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

**January 16, 1980**  
(DATE)

(SIGNATURE OF APPLICANT)

**J.G. Timmerman**

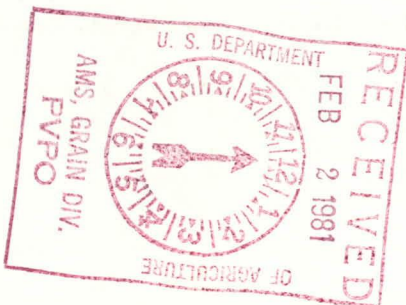
(SIGNATURE OF APPLICANT)

(DATE)

FORM GR-470 (1-78)

**ROYAL SLUIS**  
Koninklijke Zaaizaadbedrijven  
Gebroeders Sluis B.V.  
ENKHUIZEN - HOLLAND

7-100117



ROYAL BROS  
1100 N. 1st St.  
St. Paul, MN 55101  
612-291-1100



U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION  
BELTSVILLE, MARYLAND 20705

EXHIBIT C  
(Bean)

OBJECTIVE DESCRIPTION OF VARIETY  
BEAN (*Phaseolus vulgaris* L.)

NAME OF APPLICANT(S) ROYAL SLUIS, Kon. Zaaizaadbedr.  
Gebroeders Sluis B.V.

ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code)

P.O. Box 22  
1600 AA Enkhuizen  
Holland

## FOR OFFICIAL USE ONLY

PVPO NUMBER

8100101

VARIETY NAME OR TEMPORARY DESIGNATION

&lt;77RS1703&gt; = FLAVEOL

Place numbers in the boxes (e.g.  ) for the characters that best describe this variety. Measured data should be for SPACED

PLANTS. Ranges may also be given. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: Royal Hort. Society Colour Chart. The location of test area is Enkhuizen  
Holland. Please answer questions appropriate for your variety if the information is available.

## 1. TYPE:

☒ 1 = Field (dry-edible)☐ 2 = Garden

## 2. MARKET MATURITY:

 Days to edible pods Days to green shells Days to dry seeds Heat units to edible pods Heat units to green shells Heat units to dry seeds No. days earlier than .....

..... Same as ..

 No. days later than .....

1 = Tendercrop  
3 = Kinghorn Wax  
5 = Michelite 62  
7 = Bush Blue Lake 290

2 = Kentucky Wonder  
4 = White Kidney  
6 = Dwarf Horticultural  
8 = Other (specify below)

~~Chevrier vert~~  
90 jours

## 3. PLANT:

☐ 1 = Determinate ☐ 2 = Indeterminate cm height cm shorter than .....

Same as ..

 cm taller than ..... cm spread cm narrower than .....

width same as ...

 cm wider than ..... Main stalk: 1 = brittle 2 = wirey

comparison variety from above

comparison  
variety  
from  
above

 Number primary branches near base

Branching habit:  
1 = compact 2 = open

1 = stout 2 = thin





## 3. PLANT: (Cont'd)

☐ 3 Pod position: 1 = low 2 = high 3 = scattered

☐ 4 Bush form (illustrated below):



1 = spherical bush form



2 = stem bush form



3 = wide bush form



4 = high bush form

5 = other (specify) \_\_\_\_\_

## 4. LEAVES:

☐ 1 1 = smooth 2 = wrinkled

☐ 1 1 = dull 2 = glossy

☐ 2 Size: 1 = small (Earliwax) 2 = medium 3 = large (Tendercrop)

☐ 3 Color: 1 = light green (as light or lighter than Bountiful) 2 = medium green  
3 = dark green (as dark or darker than Bush Blue Lake 290)

## 5. FLOWERS:

☐ 1 Color: 1 = white 2 = cream 3 = pink 4 = lilac 5 = purple 6 = Other (specify) \_\_\_\_\_

☐ Days to 50% bloom

## 6. FRESH PODS: (Edible maturity, average for 20 pods)

☐ 3 Exterior color: 1 = light green (as light or lighter than Bountiful)  
2 = medium green  
3 = dark green (as dark or darker than Bush Blue Lake 290)  
4 = light yellow (Brittlewax)  
5 = golden yellow (Cherokee Wax)  
6 = green-red variegated (Horticultural)  
7 = other (specify) \_\_\_\_\_

% Sieve size distribution at optimum maturity for non-flat pods

## Note:

1 = 4.76 mm to 5.76 mm

2 = 5.76 mm to 7.34 mm

3 = 7.34 mm to 8.34 mm

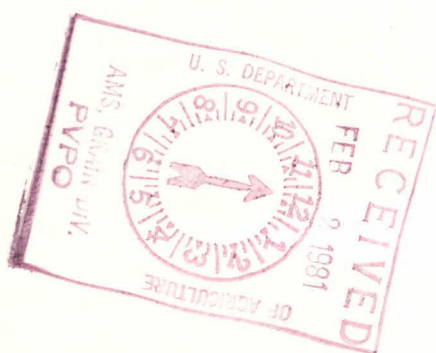
4 = 8.34 mm to 9.53 mm

5 = 9.53 mm to 10.72 mm

6 = 10.72 mm or larger

1	2	3	4	5	6
77RS1703 is a Flageolet Bean					

3 sieve	<input type="checkbox"/> 1 <input type="checkbox"/> 2	cm length	<input type="checkbox"/> 1 <input type="checkbox"/> 0	mm width	<input type="checkbox"/> <input type="checkbox"/> mm thickness
4 sieve	<input type="checkbox"/> <input type="checkbox"/>	cm length	<input type="checkbox"/> <input type="checkbox"/>	mm width	<input type="checkbox"/> <input type="checkbox"/> mm thickness
5 sieve	<input type="checkbox"/> <input type="checkbox"/>	cm length	<input type="checkbox"/> <input type="checkbox"/>	mm width	<input type="checkbox"/> <input type="checkbox"/> mm thickness
6 sieve	<input type="checkbox"/> <input type="checkbox"/>	cm length	<input type="checkbox"/> <input type="checkbox"/>	mm width	<input type="checkbox"/> <input type="checkbox"/> mm thickness





CW  
3/25/82




## 6. FRESH PODS: (Cont'd)

- 1 Cross section pod shape: 1 = flat 2 = oval 3 = round 4 = heart
- 2 Creaseback: 1 = present 2 = absent
- 1 Pubescence: 1 = none 2 = sparse 3 = considerable
- 2 Spur: 1 = straight 2 = slightly curved 3 = curved
- 2 Constrictions: 1 = none 2 = slight 3 = deep
- 3 Pod flesh: 1 = light 2 = medium 3 = dark
- 1 6 mm spur length
- 3 Fiber: 1 = none 2 = sparse 3 = considerable
- 7 Number of seeds per pod
- 1 Surface: 1 = smooth 2 = rough
- 2 Suture string: 1 = present 2 = absent
- 3 Seed development (Snap Bean): 1 = slow 2 = medium 3 = fast
- 1 Machine harvest: 1 = adapted 2 = not adapted
- 0 Pod flavor: (1) Standard (Tendercrop)  
(2) Mild Blue Lake (BBL 274)  
(3) Strong Blue Lake (Pole FM1)  
(4) Mild Romano (Roma)  
(5) Strong Romano (Pole Romano)  
(6) Other (specify) \_\_\_\_\_

## 7. SEED COAT COLOR:

- 1 1 = Monochrome 2 = Polychrome 1 1 = shiny 2 = dull
- 11 = 1 = WHITE R/S 4/19/83  
Primary color: 1 = white 2 = yellow 3 = buff 4 = tan
- ~~11~~ Secondary color: 5 = brown 6 = pink 7 = red 8 = purple  
9 = blue 10 = black 11 = other (specify) ~~middle-green~~ R/S
- 1 Color Pattern: 1 = none 2 = splashed 3 = mottled 4 = striped 5 = flecked 6 = dotted
- 0 Secondary color location: 1 = hilar ring 2 = ventral surface  
3 = sides 4 = dorsal surface  
5 = not restricted to any area 6 = combination of location (specify below)
- 1 Hilar ring on colored seeds: 1 = absent 2 = narrow 3 = butterfly shaped

## 8. SEED SHAPE AND SIZE:

- 2 Hilum view: 1 = elliptical 2 = oval 2 Cross section: 1 = elliptical 2 = oval 3 = cordate  
3 = round 4 = round
- 3 Side view:   
- 1 = oval to oblong 2 = round 3 = reniform





## 8. SEED SHAPE AND SIZE: (Cont'd)

☐ 2 1 = truncate ends 2 = rounded ends

☐ 2 ☐ 0 gm/100 seed

☐ 0 ☐ 8 gm/100 seed lighter than ..... ☐ 8
gm/100 seed same as .... ☐
☐ ☐ gm/100 seed heavier than ..... ☐

comparison variety from page one

## 9. ANTHOCYANIN: (1 = absent 2 = present)

☐ 1 Flowers☐ 1 Stems☐ 1 Pods☐ 1 Seeds☐ 1 Leaves

## 10. DISEASE RESISTANCE (0 = not tested 1 = susceptible 2 = resistant):

☐ 2 Anthracnose (specify race below)  
race  $\alpha$ ,  $\beta$ ,  $\delta$  (Alpha, Beta and Delta)
☐ 0 Rust (specify race below)

☐ 0 Powdery mildew

☐ 0 Fusarium root rot

☐ 0 Pythium root rot

☐ 0 Rhizoctonia root rot

☐ 0 Pythium wilt

☐ 0 Angular leaf spot

☐ 0 Bacterial wilt

☐ 1 Halo blight (specify race below)

☐ 0 Fuscous blight

☐ 0 Red node virus

☐ 0 Pod mottle virus

☐ 2 Bean common mosaic virus (specify strain below)

☐ 1 Mosaic mottle

☐ 1 Black root

☐ 0 Bean yellow mosaic virus

☐ 0 Curly top

☐ Other (specify below)

N.Y. 15

N.L. 1 type str

N.L. 4 Mexican

str

Florida Strain

## 11. INSECT RESISTANCE: (0 = not tested 1 = susceptible 2 = resistant)

☐ 0 Aphids

☐ 0 Leaf hopper

☐ 0 Lygus

☐ 0 Pod borer

☐ 0 Root knot nematode

☐ 0 Seed corn maggot

☐ 0 Thrips

☐ 0 Weavils

☐ Other (specify below)

## 12. PHYSIOLOGICAL RESISTANCE: (0 = not tested 1 = susceptible 2 = resistant)

☐ 2 Heat

☐ 1 Cold

☐ 2 Drought

☐ 0 Air pollution

## 13. COMMENTS:

